

CLAIMS

1. A method of building a folded breaker for a tire building drum having a plurality of drum folding modules at spaced apart edge positions circumferentially of said drum with each module having a belt with a first belt end fastened to said module and a
5 second belt end fastened to an axially movable nose member comprising:

a. wrapping a wide breaker ply around said drum and said first belt end of each said belt fastened to said module and splicing the leading edge and trailing edge together,

b. wrapping a narrow breaker ply having a width less than the width of said
10 wide breaker ply around said wide breaker ply exposing an overlap edge of said wide breaker ply at each edge of said wide breaker ply and splicing the leading edge and trailing edge of said narrow breaker ply, characterized by,

c. folding each said overlap edge of said wide breaker ply over each edge of said narrow breaker ply by moving said belt carrying each said overlap edge over each
15 said edge of said narrow breaker ply and by moving said nose member over each said edge of said narrow breaker ply.

2. The of claim 1 further characterized by moving each said nose member radially outward for carrying said belt and said overlap edge of said wide breaker ply over each said edge of said narrow breaker ply.

20 3. The method of claim 2 further characterized by maintaining each said overlap edge of said wide breaker ply in contact with said belt during said application over each said edge of said narrow breaker ply by maintaining said belt in tension. ~~_____~~ X

4. The method of claim 1 further characterized by peeling said belt away from each said overlap edge after folding each said overlap edge over each said edge of said
25 narrow breaker ply by moving each said nose member axially outward relative to said module.

5. A tire building drum assembly for folding edges of a wide breaker ply over edges of a narrow breaker ply wrapped around said wide breaker ply comprising a plurality of circumferentially spaced drum segments characterized by a center module
30 mounted on each of said drum segments, a folding module mounted on each of said segments at each end of said center module, each said folding module having a nose piece movable axially of said drum from an axially outer position having the same

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diameter as the diameter of said center module to an axially inner position overlapping said center module, a folding belt wrapped around each said nose piece with an axially inner end fastened to said center module and an axially outer end connected to a spring means on said nose piece for maintaining tension in said belt providing a support for an overlap edge of said wide breaker ply in the axially outer position of said nose piece and providing for sliding movement of said belt over said nose piece upon said axial movement of said nose piece to said axially inner position for folding each said overlap edge of said wide breaker ply over each said edge of said narrow breaker ply.

6. A building drum according to claim 5 further characterized by folding module activating means connected to said folding modules for providing axial movement of each said nose piece between said ~~radially~~ ^{axially outer} outward position and said ~~radially~~ ^{axially} inner position.

7. The building drum assembly according to claim 6 further characterized by said activating means comprising an axially movable hub connected to each said nose piece and movable axially for folding over said edges by said nose piece.

8. The building drum assembly according to claim 7 further characterized by beveled surfaces on each said nose piece and on said center module for providing expansion of each said nose piece during folding of each said overlap edge.

9. The building drum assembly of claim 8 further characterized by each said nose piece being mounted on resilient means permitting a radially outward expanding movement of each said nose piece during axial movement between said inner position and said outer position and providing return of said nose piece after said folding operation.

10. The building drum assembly of claim 9 further characterized by said resilient means comprising a compression spring mounted on a sliding member and said sliding member being slidably mounted on a rail mounted on said drum segment.